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EXAMINER

VU, THAI

ART UNIT

PAPER NUMBER

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/975,287

Applicant(s)

NELSON ET AL.

Examiner

Thai N Vu

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 October 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-55 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-55 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 07/11/2002
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

1. Claim 22 recites the limitation "said means" in second line. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-2, 6-7, 11-15, 18-20, 41, 44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mitchell et al. (U.S. Patent #: 5,966,671; hereinafter Mitchell) in view of Anderson (U.S. Patent #: 5,721,783; hereinafter Anderson).

Regarding claim 1, Mitchell teaches a wireless mobile phone comprising:

a body casing having a plurality of surfaces (FIG. 1);

an input keypad disposed on said a first surface of said body casing to facilitate entry of alphanumeric data (FIG. 2, keypad 202; column 2, lines 55-65);

at least a first button disposed on a second surface of said body casing (FIG. 2, buttons 124,128,126).

It should be noticed that Mitchell fails to clearly teach the feature of the complementary logic in support of the at least first button to facilitate entry of alphanumeric data in encoded representations of a variable length encoding scheme using said at least first button. However, Anderson teaches such limitations in FIG. 9, Digital Signal Processor 948 providing digital logic support for Morse Code Keys 956; and column 20, line 65-column 21, line 2, for the purpose of performing data entry on a mobile device.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the use of the feature of the complementary logic in support of the at least first button to facilitate entry of alphanumeric data in encoded representations of a variable length encoding scheme using said at least first button, as taught by Anderson, in view of Mitchell, in order facilitate the process of entering messages using a mobile device.

Regarding claim 2, Anderson further teaches limitations of the claim in column 20, line 65-column 21, line 2.

Regarding claim 6, Anderson further teaches limitations of the claim in column 20, line 65-column 21, line 2.

Regarding claim 7, Anderson further teaches limitations of the claim in column 20, line 65-column 21, line 2.

Regarding claim 11, Anderson further teaches limitations of the claim in 20, line 65-column 21, line 25.

Regarding claim 12, Anderson further teaches limitations of the claim in 20, line 65-column 21, line 25 (Anderson teaches code format used could be Morse or any other code. It is obvious that users can use any code to define letters suitable for his/her needs).

Regarding claim 13, Anderson further teaches limitations of the claim in 20, line 65-column 21, line 25 (Anderson teaches code format used could be Morse or any other code. It is obvious that users can use any code to define letters suitable for his/her needs).

Regarding claim 14, Anderson further teaches limitations of the claim in FIG. 9, Digital Signal Processor 948 and Morse Code Keys 956 and column 21, lines 25-30 (It is inherently understood that, data, when converted into text messages by a micro-processor are processed as bytes, each byte contains fixed 8 binary bits).

Regarding claim 15, Anderson further teaches limitations of the claim in column 20, line 65-column 21, line 25.

Regarding claim 18, Mitchell teaches limitations of the claim in FIG. 2.

Regarding claim 19, Mitchell teaches limitations of the claim in FIG. 2.

Regarding claim 20, Anderson teaches limitations of the claim in FIG. 7.

Regarding claim 41, Mitchell teaches a wireless mobile phone comprising:
a body casing having a top surface and a side surface (FIG. 2);

a first button disposed on either said top surface or said side surface of said body casing (FIG. 2, keypad 202);

a second button disposed on the same top/side surface of said body casing adjacent to said first button (FIG. 2, buttons 124,136,128);

means coupled to the first and second buttons (FIG. 5, microprocessor 503, keypad 202 and smart button 130) and to the transceiver (Fig. 5, receiver 527 and transmitter 523).

It should be noticed that Mitchell fails to clearly teach the feature of facilitating the entry of alphanumeric data in encoded representations of a variable length encoding scheme using said first and second buttons. However, Anderson teaches such limitations in column 20, line 65-column 21, line 25, for the purpose of performing data entry on a mobile device.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the use of the feature of facilitating entry of alphanumeric data in encoded representations of a variable length encoding scheme using said first and second buttons, as taught by Anderson, in view of Mitchell, in order to facilitate the process of entering messages using a mobile device.

Regarding claim 44, Mitchell teaches a wireless mobile phone comprising:

a body casing having a top surface and a side surface (FIG. 2);

a first button disposed on either said top surface or said side surface of said body casing (FIG. 2, keypad 202);

a second button disposed on the same top/side surface of said body casing adjacent to said first button (FIG. 2, buttons 124,136,128); and

a micro-controller (FIG. 5, microprocessor 503) and associated memory (FIG.5, memory 505, 507, 509), including programming instructions stored in said memory (column 4, lines 5-17), coupled to the first and second buttons (Fig. 5, smart button 130 and keypad 202) and to the transceiver (Fig. 5, receiver 527 and transmitter 523)

It should be noticed that Mitchell fails to clearly teach the feature of facilitating entry of alphanumeric data in encoded representations of a variable length encoding scheme using said first and second buttons. However, Anderson teaches such limitations in column 20, line 65-column 21, line 2, for the purpose of performing data entry on a mobile device.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the use of the feature of facilitating entry of alphanumeric data in encoded representations of a variable length encoding scheme using said first and second buttons, as taught by Anderson, in view of Mitchell, in order facilitate the process of entering messages using a mobile device.

4. Claims 3, 42 and 45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mitchell in view of Anderson as applied to claims 1, 41 and 44 above, and further in view of Faucher et al. (U.S. Patent #: 5,455,861; hereinafter Faucher).

Regarding claim 3, Mitchell and Anderson, in combination, teaches all subject matter as claimed above and Anderson further teaches the feature of complementary

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logic visually echoing encoded representations of a variable length encoding scheme of letters, numbers or punctuations entered through said input keypad (column 20, line 65-column 21, line 2).

It should be noticed that Mitchell and Anderson fails to teach the feature of each of said, at least first button including one or more light emitting diodes (LED). However, Faucher teaches such limitations in column 5, lines 22-26 (LED display consisting of several LEDs) for the purpose of echoing data entered via the keypad.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the use of the feature of at least first button including one or more light emitting diodes (LED) (using an LED display), as taught by Faucher, into view of Mitchell and Anderson, in order to make the display brighter so it can be used by low vision users.

Regarding claim 42, Mitchell and Anderson, in combination, teaches all subject matter as claimed above and Anderson further teaches the feature of an input key pad to input alphanumeric data (FIG. 7) and.

visually echoing the variable length encoded representations of the alphanumeric data entered (column 5, lines 22-26).

It should be noticed that Mitchell and Anderson, in combination, fails to teach the feature of first and second buttons comprising light emitting diodes. However, Faucher teaches such limitations in column 5, lines 22-26 (LED display consisting of several LEDs) for the purpose of echoing data entered via the keypad.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the use of the feature of at least first button including one or more light emitting diodes (LED) (using an LED display), as taught by Faucher, into view of Mitchell and Anderson, in order to make the display brighter so it can be used by low vision users.

Regarding claim 45, Mitchell and Anderson, in combination, teaches all subject matter as claimed above and Anderson further teaches the features of

an input key pad to input alphanumeric data (FIG. 7); and

visually echoing the variable length encoded representations of the alphanumeric data entered (column 5, lines 22-26).

It should be noticed that Mitchell and Anderson, in combination, fails to teach the feature of first and second buttons comprising light emitting diodes. However, Faucher teaches such limitations in column 5, lines 22-26 (LED display consisting of several LEDs) for the purpose of echoing data entered via the keypad.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the use of the feature of at least first button including one or more light emitting diodes (LED) (using an LED display), as taught by Faucher, into view of Mitchell and Anderson, in order to make the display brighter so it can be used by low vision users.

5. Claims 4, 5, 43, and 46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mitchell in view of Anderson as applied to claims 1, 41 and 44 above and further in view of Le Pechon (U.S. Patent #: 4,630,208; hereinafter Le Pechon).

Regarding claim 4, Mitchell further teaches the feature of a transceiver to send and receive signals (FIG. 5, transmitter 523 and receiver 527).

an adapter interface to removably attach a device capable of vibrating to said mobile phone (column 3, lines 27-30 and FIG. 4, port 402 for use with a headphone. A headphone is a device capable of vibrating at audible frequencies), and

It should be noticed that Mitchell fails to teach the feature of vibrationally outputting alphanumeric data received through said transceiver using said removably attached capable of vibrating device. However, Le Pechon teaches such limitations of the claim in FIG. 1 and column 4, lines 19-24 for the purpose of receiving Morse code signal.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the use of the feature of vibrationally outputting alphanumeric data received through said transceiver using said removably attached capable of vibrating device, as taught by Le Pechon, into view of Mitchell and Anderson, in order to be used by visual impaired users.

Regarding claim 5, Anderson further teaches limitations of the claim in column 20, line 65-column 21, line 2.

Regarding claim 43, Anderson further teaches transceiver means to receive textual messages (column 26, lines 24-30)

adapter means to removably receive a vibrational device (lines 27-30; FIG. 4, port 402 column 3, for use with a headphone. A headphone is a device capable of vibrating at audible frequencies),

It should be noticed that Mitchell fails to teach the feature of to vibrationally outputting the variable length encoded representations of the textual messages received. However, Le Pechon teaches such limitations of the claim in FIG. 1 and column 4, lines 19-24 for the purpose of receiving Morse code signal.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the use of the feature of to vibrationally outputting the variable length encoded representations of the textual messages received, as taught by Le Pechon, into view of Mitchell and Anderson, in order to be used by visual impaired users.

Regarding claim 46, Anderson further teaches transceiver means to receive textual messages (column 26, lines 24-30)

adapter means to removably receive a vibrational device (lines 27-30; FIG. 4, port 402 column 3, for use with a headphone. A headphone is a device capable of vibrating at audible frequencies),

It should be noticed that Mitchell fails to teach the feature of to vibrationally outputting the variable length encoded representations of the textual messages received. However, Le Pechon teaches such limitations of the claim in FIG. 1 and column 4, lines 19-24 for the purpose of receiving Morse code signal.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the use of the feature of to vibrationally outputting the variable length encoded representations of the textual messages received, as taught by Le Pechon, into view of Mitchell and Anderson, in order to be used by visual impaired users.

6. Claims 8-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mitchell in view of Anderson as applied to claims 1 and 7 above, and further in view of Tanaka (JP. Patent #: JP409107568A; hereinafter Tanaka).

Regarding claim 8, Mitchell and Anderson, in combination, teaches all subject matter as claimed above, except for the feature of a first code representing a phrase of one or more words in length. However, Tanaka teaches such limitations in the abstract, for the purpose of efficiently receiving message greetings.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the use of the feature of a first code representing a phrase of one or more words in length, as taught by Tanaka, into view of Mitchell and Anderson, in order to improve the message expressing force in small mobile communication devices.

Regarding claim 9, Tanaka further teaches limitations of the claim in the abstract (codes and definitions are stored in RAM for easy accesses if changes are desired).

Regarding claim 10, Tanaka further teaches limitations of the claim in the abstract (it is inherently understood that more codes can be defined besides '0001').

7. Claims 16 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mitchell in view of Anderson as applied to claim 1 above, and further in view of Lee (U.S. Patent #: 5,418,903; hereinafter Lee).

Regarding claim 16, Mitchell and Anderson, in combination, teaches all subject matter as claimed above, Anderson further teaches the feature of an additional button in column 20, line 65-column 21, line 2.

It should be noticed that Mitchell and Anderson, in combination, fails to teach the feature of one or more frequently used encoded representations associated with the additional second button. However, Lee teaches such limitations in column 4, lines 11-19, for the purpose of avoiding requiring the user to key-in commonly used words.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the use of the feature of one or more frequently used encoded representations associated with the additional second button, as taught by Lee, into view of Mitchell and Anderson, in order to facilitate the process of keying-in commonly used words.

Regarding claim 17, Lee further teaches limitations of the claim in column 4, lines 11-19 (all words can be set up by the user, thus it would be inherently understood that a space can be reserved since it is frequently used).

8. Claims 21-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mitchell in view of Le Pechon.

Regarding claim 21, Mitchell teaches: a wireless mobile phone comprising:
a transceiver to send and receive signals (FIG. 5, transmitter 523 and receiver 527);

an adapter interface to removably attach a device capable of vibrating to said mobile phone (FIG. 4, port 402; column 3, lines 27-30 for use with a headphone. A headphone is a device capable of vibrating at audible frequencies); and complementary logic in support to said transceiver (FIG.5, microprocessor 503 providing control logic for the transceiver 523, 527)

It should be noticed that Mitchell fails to teach the feature of adaptor interface vibrationally outputting alphanumeric data received through said transceiver using said removably attached capable of vibrating device. However, Le Pechon teaches such limitations of the claim in FIG. 1 and column 4, lines 19-24 (headset producing vibration, i.e. sound wave) for the purpose of receiving Morse code signal.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the use of the feature of adaptor interface vibrationally outputting alphanumeric data received through said transceiver using said removably attached capable of vibrating device, as taught by Le Pechon, into view of Mitchell, in order to be used by visual impaired users.

Regarding claim 22, Mitchell further teaches limitations of the claim in FIG. 5, display 204.

Regarding claim 23, Le Pechon further teaches limitations of the claim in column 4, lines 19-24.

9. Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mitchell in view of Le Pechon as applied to claim 21 above and further in view of Anderson.

Regarding claim 24 Mitchell and Le Pechon, in combination, teaches all subject matter as claimed above, except for the feature of encoded representations being encoded representations of a custom variable length encoding scheme. However, Anderson teaches such limitations in column 20, line 65-column 21, line 2 for the purpose of providing alternate ways of entering data on a mobile device.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the use of the feature of encoded representations being encoded representations of a custom variable length encoding scheme, as taught by Anderson, into view of Mitchell and Le Pechon, in order to provide a suitable customized way for the user to enter messages using the mobile device.

10. Claims 25-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mitchell in view of Le Pechon and Anderson as applied to claims 21 and 24 above and further in view of Tanaka.

Regarding claim 25, Mitchell, Le Pechon and Anderson, in combination, teaches all subject matter as claimed above, except for the feature of a first code representing a phrase of one or more words in length. However, Tanaka teaches such limitations in the abstract, for the purpose of efficiently receiving message greetings.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the use of the feature of a first code representing a phrase of one or more words in length, as taught by Tanaka, into view of Mitchell and Anderson, in order to improve the message expressing force in small mobile communication devices.

Regarding claim 26, Tanaka further teaches limitations of the claim in the abstract (codes and definitions are stored in RAM for easy accesses if changes are desired).

Regarding claim 27, Anderson further teaches limitations of the claim in 20, line 65-column 21, line 25.

Regarding claim 28, Anderson further teaches limitations of the claim in 20, line 65-column 21, line 25 (Anderson teaches code format used could be Morse or any other code. It is obvious that users can use any code to define letters suitable for his/her needs).

Regarding claim 29, Anderson further teaches limitations of the claim in 20, line 65-column 21, line 25 (Anderson teaches code format used could be Morse or any other code. It is obvious that users can use any code to define letters suitable for his/her needs).

Regarding claim 30, Anderson further teaches limitations of the claim in FIG. 9, Digital Signal Processor 948 and Morse Code Keys 956 and column 21, lines 25-30 (It is inherently understood that, data, when converted into text messages by a micro-processor are processed as bytes, each byte contains fixed 8 binary bits).

11. Claims 31-33, 36-39 and 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mitchell in view of Anderson and Faucher.

Regarding claim 31, Mitchell teaches a wireless mobile phone comprising:
a body casing having a plurality of surfaces (FIG. 1);
an input keypad disposed on said a first surface of said body casing to facilitate entry of alphanumeric data (FIG. 2, keypad 202, column 2, lines 55-65);
at least a first button disposed on a second surface of said body casing (FIG. 2, buttons 124,128,126) having a first one or more light emitting diodes (LEDs) (FIG. 4 404 and column 3, lines 30-35); and

It should be noticed that Mitchell fails to clearly teach the feature of the complementary logic in support of keypad and the at least first button to visually echo encoded representations of a variable length encoding scheme of letters, numbers or punctuations entered through said input keypad.

However, Anderson teaches such limitations in FIG. 9, Digital Signal Processor 948 providing digital logic support for Morse Code Keys 956; and column 20, line 65-column 21, line 2 and FIG. 9, for the purpose of performing data entry on a mobile device.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the use of the feature of the complementary logic in support of the at least first button to facilitate entry of alphanumeric data in encoded representations of a variable length encoding scheme using said at least first

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button, as taught by Anderson, in view of Mitchell, in order facilitate the process of entering messages using a mobile device.

It should be further noticed that, Mitchell and Anderson, in combination, fails to clearly teach the feature of first button to light said LEDs. However, Faucher teaches such limitations in column 5, lines 22-26 (LED display consisting of several LEDs) for the purpose of echoing data entered via the keypad.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the use of the feature of at least first button including one or more light emitting diodes (LED) (using an LED display), as taught by Faucher, into view of Mitchell and Anderson, in order to make the display brighter so it can be used by low vision users.

Regarding claim 32, Anderson further teaches limitations of the claim in column 20, line 65-column 21, line 2.

Regarding claim 33, Anderson further teaches limitations of the claim in column 20, line 65-column 21, line 2.

Regarding claim 36, Anderson further teaches limitations of the claim in column 20, line 65-column 21, line 25.

Regarding claim 37, Anderson further teaches limitations of the claim in 20, line 65-column 21, line 25 (Anderson teaches code format used could be Morse or any other code. It is obvious that users can use any code to define letters suitable for his/her needs).

Regarding claim 38, Anderson further teaches limitations of the claim in 20, line 65-column 21, line 25 (Anderson teaches code format used could be Morse or any other code. It is obvious that users can use any code to define letters suitable for his/her needs).

Regarding claim 39, Anderson further teaches limitations of the claim in FIG. 9, Digital Signal Processor 948 and Morse Code Keys 956 and column 21, lines 25-30 (It is inherently understood that, data, when converted into text messages by a micro-processor are processed as bytes, each byte contains fixed 8 binary bits).

Regarding claim 40, Mitchell teaches limitations of the claim in FIG. 2.

12. Claims 34 and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mitchell in view of Anderson and Faucher, as applied to claims 31 and 33 above and further in view of Tanaka.

Regarding claim 34, Mitchell, Anderson and Faucher, in combination, teaches all subject matter as claimed above, except for the feature of a first code representing a phrase of one or more words in length. However, Tanaka teaches such limitations in the abstract, for the purpose of efficiently receiving message greetings.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the use of the feature of a first code representing a phrase of one or more words in length, as taught by Tanaka, into view of Mitchell and Anderson, in order to improve the message expressing force in small mobile communication devices.

Regarding claim 35, Tanaka further teaches limitations of the claim in the abstract (codes and definitions are stored in RAM for easy accesses if changes are desired).

13. Claims 47 and 48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Anderson in view of Mitchell et al.

Regarding claim 47, Anderson teaches, in a wireless mobile phone, a method comprising:

receiving encoded representations of a variable length encoding scheme of alphanumeric data entered using at least a first button (column 20, line 65-column 21, line 2)

said mobile phone also having an input keypad disposed on a front surface to facilitate entry of alphanumeric data (FIG. 7).

in response, electrically generating signals corresponding to fixed length digital representations of said alphanumeric data entered through entry of their variable length encoded representations of said variable length encoding scheme using said at least a first button (FIG. 9, Digital Signal Processor 948 and Morse Code Keys 956 and column 21, lines 25-30. It is inherently understood that, data, when converted into text messages by a micro-processor are processed as bytes, each byte contains fixed 8 binary bits).

It should be noticed that Anderson fail to teach the feature of at least a first button disposed on top or side of the surface of the mobile phone. However Mitchell

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teaches such limitations in FIG. 2, button 124,126,128, for the purpose of controlling the cursor.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the use of the feature of at least a first button disposed on top or side of the surface of the mobile phone, as taught by Mitchell, in view of Anderson, in order to facilitate process of operating the mobile phone.

Regarding claim 48, Anderson further teaches limitation of the claim in (column 20, line 65-column 21, line 2).

14. Claim 49 is rejected under 35 U.S.C. 103(a) as being unpatentable over Anderson in view of Mitchell as applied to claim 47 above, and further in view of Faucher.

Regarding claim 49, Anderson further teaches the feature of visually echoing the variable length encoded representations of said variable length encoding scheme of letters, numbers and punctuations entered through said input keypad in column 20, line 65-column 21, line 25.

It should be noticed that, Anderson and Mitchell fails to teach the step of at least a first button including one or more light emitting diodes (LED), and said method further comprises lighting said LEDs of said at least a first button. However, Faucher teaches such limitations in column 5, lines 22-26 (LED display consisting of several LEDs) for the purpose of echoing data entered via the keypad.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the use of the feature of at least a first button including one or more light emitting diodes (LED), and said method further comprises lighting said LEDs of said at least a first button (using an LED display), as taught by Faucher, into view of Mitchell and Anderson, in order to make the display brighter so it can be used by low vision users.

15. Claim 50 is rejected under 35 U.S.C. 103(a) as being unpatentable over Anderson in view of Mitchell as applied to claim 47 above and further in view of Le Pechon.

Regarding claim 50, Anderson and Mitchell, teaches all subject matter as claimed above and Mitchell further teaches the step of an adapter interface to removably attach a capable of vibrating device to said mobile phone (lines 27-30; FIG. 4, port 402 column 3, for use with an headphone. A headphone is a device capable of vibrating at audible frequencies),

It should be noticed that, Anderson and Mitchell fails to teach the step of vibrationally outputting the variable length encoded representations of the alphanumeric data received through a transceiver of said mobile phone using said removably attached capable of vibrating device. However, Le Pechon teaches such limitations in FIG. 1 and column 4, lines 19-24 for the purpose of receiving Morse code signal.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the use of the step of vibrationally outputting

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the variable length encoded representations of the alphanumeric data received through a transceiver of said mobile phone using said removably attached capable of vibrating device, as taught by Le Pechon, into view of Mitchell and Anderson, in order to be used by visual impaired users.

16. Claims 51-54 are rejected under 35 U.S.C. 103(a) as being unpatentable over Keshavachar (U.S. Patent #: 6,631,274; hereinafter Keshavachar) in view of Anderson.

Regarding claim 51, Keshavachar teaches a method of communication comprising: employing a wireless mobile phone to place a call to a callee and communicate verbally with the callee using the wireless mobile phone (column 4, lines 6-7); and

at selected moments of desired increased privacy during the call, communicate non-verbally with the callee, and sending the entered text messages to the callee (column 4, lines 6-20. Keshavachar teaches a communication system that allows mobile users to transmit text messages (SMS) while in voice mode. It is inherently understood that users would choose moments when higher level of privacy is desired to communicate using messages instead of voice).

It should be noticed that Keshavachar fails to clearly teach the feature of entering text messages to be transmitted to the callee in an encoded representation form in accordance with a variable length encoding scheme, using at least a first button disposed on a top or side surface of the wireless mobile phone. However Anderson

teaches such limitations in column 20, line 64- column 21, line 2 and FIG. 7, button 72, for a purpose of performing data entry

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the use of the feature entering text messages to be transmitted to the callee in an encoded representation form in accordance with a variable length encoding scheme, using at least a first button disposed on a top or side surface of the wireless mobile phone, as taught by Anderson, in view of Keshavachar, in order facilitate the process of entering messages using a mobile device.

Regarding claim 52, Anderson further teaches limitations of the claim in FIG. 9, Digital Signal Processor 948 and Morse Code Keys 956 and column 21, lines 25-30 (It is inherently understood that, data, when converted into text messages by a micro-processor are processed as bytes, each byte contains fixed 8 binary bits).

Regarding claim 53, Anderson further teaches limitations of the claim in column 20, line 65-column 21, line 2.

Regarding claim 54, Anderson further teaches limitations of the claim in column 20, line 65-column 21, line 2.

17. Claim 55 is rejected under 35 U.S.C. 103(a) as being unpatentable over Keshavachar in view of Anderson as applied to claims 51 and 54 above, and further in view of Tanaka.

Regarding claim 55, Mitchell and Anderson, in combination, teaches all subject matter as claimed above, except for the step of the variable length encoded representations comprising a first code representing a first user selected word/phrase. However, Tanaka teaches such limitations in the abstract, for the purpose of efficiently receiving message greetings.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the use of the variable length encoded representations comprising a first code representing a first user selected word/phrase, as taught by Tanaka, into view of Mitchell and Anderson, in order to improve the message expressing force in small mobile communication devices.

Conclusion

18. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thai N Vu whose telephone number is 703-305-3417. The examiner can normally be reached on 9:00AM-6:00PM, M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lester Kincaid can be reached on 703-306-3016. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Thai Vu
Examiner
Art Unit 2687


12/14/07
LESTER G. KINCAID
PRIMARY EXAMINER